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Indian Standard

SPECIFICATION FOR BLADE FOR TRACTOR-OPERATED SCRAPER

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NEW DELHI 110002

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Indian Standard

SPECIFICATION FOR BLADE FOR TRACTOR-OPERATED SCRAPER

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(*Continued on page* 2)

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Indian Standard

SPECIFICATION FOR BLADE FOR TRACTOR-OPERATED SCRAPER

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 July 1982, after the draft finalized by the Soil Working Equipment Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Blade is a soil cutting component of the scraper and wears out earlier than other components. Hence it has to be replaced very often. A need was therefore, felt to prepare an Indian Standard stipulating the quality characteristics and those dimensions which are necessary for ensuring interchangeability of the blade.

0.3 In preparation of this standard, assistance has been derived from Tractor Training and Testing Station, Budni.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard specifies material dimensions and other requirements of blade for tractor-operated scraper.

1.1.1 This standard covers the requirements of blade for scraper of 1·5 to 2·0 m^3 capacity.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply.

2.1 Angle of the Cutting Edge — The angle included between two faces of the cutting edge.

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*Rules for rounding off numerical values (*revised*).

2.2 Blade — A hardened steel plate of trapezoidal section fastened to the bowl of scraper for cutting the soil.

2.3 Blade Width — Distance between two cutting edges.

2.4 Cutting Edge — The front portion of the blade which penetrates into the soil and makes a horizontal cut below the surface.

2.5 Reversible Blade — The blade which can be fastened in two positions in such a way that any one of the two cutting edges can be used for cutting the soil.

3. MATERIAL

3.1 Carbon steel having minimum carbon content of 0·65 percent shall be used.

4. HARDNESS

4.1 The hardness of blade shall be between 500 to 600 HB upto 50 mm from front of cutting edge.

5. DIMENSIONS

5.1 The length of the blade (*see L* in Fig. 1) shall be as specified by the purchaser. Length of the blade shall be made up of one piece or of multiple pieces.

5.2 The width of the blade (*see W* in Fig. 1) shall be 175±5 mm.

5.3 The thickness of the blade (*see T* in Fig. 1) shall be 12±0·5 mm.

5.4 The angle of the cutting edge (*see* α in Fig. 1) shall be 20±2°.

5.5 The depth of square bolt seat (*see A* in Fig. 1) shall be 8·0±0·5 mm. The angle of the counter sinking (*see* β) shall be 82°.

5.6 Hole size for fastening the blade (*see B* in Fig. 1) shall be a square of dimensions 16±0·5 mm and the centre to centre distance shall be 125±0·5 mm (*see D* in Fig. 1).

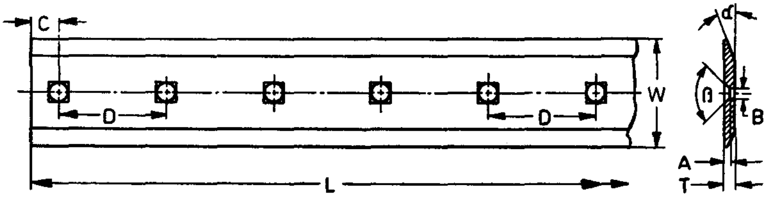

Fig. 1 Dimensions of Blade

5.7 The distance between the end and the first hole (*see C* in Fig. 1) shall be 62·5±0·5 mm.

5.8 Thickness of the cutting edge shall be 2±0·5 mm.

6. WORKMANSHIP AND FINISH

6.1 All sharp edges, except cutting edge, shall be removed. The blade shall be free from cracks, pits, burrs and other visual defects.

6.2 Drilling shall be clean and free from all defects.

6.3 A protective coating shall be provided.

7. MARKING AND PACKING

7.1 Marking — Each blade shall be suitably marked with the following:

a) Manufacturer's name and registered trade mark, if any;

b) Batch or code number; and

c) Length.

7.1.1 Each blade may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7.2 Packing — The blades shall be packed, as agreed to between the purchaser and the supplier, for safe handling in transit.

8. SAMPLING FOR LOT ACCEPTANCE

8.1 Unless otherwise agreed to between the purchaser and the supplier, the method of sampling and criteria for acceptance shall be in accordance with **3** of IS : 7201-1974*.

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*Methods of sampling of agricultural tractors and machinery.

INDIAN STANDARDS ON SOIL WORKING EQUIPMENT

IS:

1976-1976	Rotary paddy weeder (*second revision*)
2192	Animal drawn mouldboard plough:
(Part I)-1976	Turnwrest type (*first revision*)
(Part II)-1976	Fixed type (Superseding IS : 2226-1962)
2564-1979	Blade, harrow, *CUNTAKA* type (*first revision*)
2565-1979	Ridger, animal drawn (*first revision*)
3185-1965	'V' blade hand hoe
3292-1965	Three tined hand hoe, fixed type
3293-1965	Levelling *KARAHA* (*KENI*) animal drawn
3301-1965	Green manure trampler, animal drawn
3342-1979	Animal drawn cultivator (*first revision*)
3360-1965	Soil scoop
3363-1965	Harrow *PATELA*
3369-1965	Puddler, animal drawn
3372-1965	Bund former
3467-1966	Wheel hand hoe
3606-1972	Disc harrow, animal drawn (*first revision*)
4366	Agricultural tillage discs:
(Part I)-1972	Concava type (*first revision*)
(Part II)-1972	Flat type (*first revision*)
6023-1970	Reversible shovel
6288-1971	Test code for mouldboard ploughs
6327-1971	One way animal drawn mouldboard plough shares
6451-1972	Sweep
6459-1972	Two-way animal drawn mouldboard plough shares
6635-1972	Tractor operated disc harrows
6638-1972	Spring loaded tractor-mounted cultivators
7015-1972	Glossary of terms relating to farm implements and machinery
7230-1974	Plain spool for tractor operated disc harrows
7256-1974	Plain spool for animal driven disc harrows
7353-1974	Blade for tractor-operated terracer
7361-1974	Tines for animal-driven cultivators
7565 (Part I)-1975	Rigid tines for tractor operated cultivators
7640-1975	Test code for disc harrows
7926-1975	Classification of soil for testing of agricultural machinery
7927-1975	Method of field testing for manually operated paddy weeder
9217-1979	Test code for agricultural discs
9218-1979	Triangular shovels for animal drawn cultivators
9813-1981	Tractor-mounted blade terracer